



CARDIOMETABOLIC HEALTH

QANUILIRPITAA? 2017

Nunavik Inuit Health Survey

Cardiometabolic diseases include, most commonly, cardiovascular diseases such as ischemic heart disease (including myocardial infarction or heart attack), cerebrovascular diseases (including strokes), congestive heart failure and atherosclerosis, and metabolic disorders such as type 2 diabetes, non-alcoholic fatty liver disease and chronic kidney disease. A series of established risk factors contribute to the development of cardiometabolic diseases, including insulin resistance, dysglycemia, elevated blood pressure, abdominal obesity, and dyslipidemia. These cardiometabolic diseases and risk factors are also influenced by a series of other determinants, such as age, sex, diet, socioeconomic status, physical activity and environmental contaminants. Despite a relatively stable prevalence of cardiovascular diseases and type 2 diabetes in the Inuit population of Nunavik in the last few decades, these conditions are a source of concern since an increase in the prevalence of their risk factors, such as smoking, elevated blood pressure and obesity, was observed in the *Qanuippitaa?* Nunavik Inuit Health Survey of 2004. Given that these risk factors are also associated with systemic organ damage, non-alcoholic fatty liver disease and chronic kidney disease were also investigated.

The cardiometabolic health of Nunavimmiut was assessed using information gathered from different sources: 1) clinical and laboratory tests were conducted to screen for diabetes/prediabetes and assess certain risk factors; 2) information on medication use was obtained from the medical files of participants; and 3) diagnoses of cardiovascular diseases, diabetes and hypertension were retrieved from the Quebec Integrated Chronic Disease Surveillance System (QICDSS). The key results of *Qanuilirpitaa?* 2017 indicate that the prevalence of type 2 diabetes in the Nunavik population in 2017 was 5% based on clinical tests or the use of antidiabetic drugs. This value is similar to that documented in 2004. Type 2 diabetes prevalence in 2017 tended to be greater in women than in men (6% vs. 4%) and to increase with age. In accordance with medico-administrative data (QICDSS), the prevalence of diabetes (type 1 and 2), ischemic heart diseases and cerebrovascular diseases in Nunavik was 7%, 5% and 3%, respectively, in fiscal year 2017-2018, whereas it was 2%, 2% and 1% in 2003-2004. About 90% of Nunavimmiut were identified as being at low risk of hepatic steatosis and fibrosis and of chronic kidney disease in *Qanuilirpitaa?* 2017.

With regard to cardiometabolic risk factors, nearly one out of four Nunavimmiut experienced elevated blood pressure according to blood pressure measurements or the use of hypotensive drugs in 2017 (24%). The prevalence in 2017 was 35% higher than in 2004 (17%), with the increase occurring mainly among men. In 2017, elevated blood pressure was more frequent in men than in women (29% and 18%, respectively), tended to increase with age and was more prevalent in Ungava Bay (32%) than in the Hudson Strait (15%) and Hudson Bay (22%) regions. Comparison of the clinical results from the survey with the medico-administrative data revealed that elevated blood pressure is underdiagnosed in the region. The prevalence of abdominal obesity (elevated waist circumference) was 46% compared to 36% in 2004. It was more prevalent in women than in men (64% vs. 27%), as well as in Ungava Bay (53%) compared to Hudson Bay (39%), but not to Hudson Strait (46%). It also tended to increase with age. The prevalence of elevated low-density lipoprotein cholesterol (LDL-C) was 18%, that of low high-density lipoprotein cholesterol (HDL-C) 22% and that of high triglycerides 29%. Compared to 2004, the prevalence of low HDL-C was two-fold greater in 2017, paralleling the increase in abdominal obesity.

The prevalence of ischemic heart diseases, elevated blood pressure and elevated waist circumference is increasing and becoming a growing health challenge in Nunavik. Although the survey data (clinical/laboratory tests and/or use of medication) for type 2 diabetes did not detect an increase in prevalence since 2004 (about 5% in both surveys), the medico-administrative data suggest that an increase did in fact occur during that same period (from 2% to 7%). As expected, cardiometabolic diseases and risk factors are more frequent in older age groups, and it will be important to consider this over the coming years as the proportion of this age group increases in the Nunavik population. As expected, cardiometabolic diseases and risk factors are more frequent in older age groups. However, the elevated prevalence of hypertension in young men is especially worrisome and clearly deserves attention from public health authorities and clinical practitioners.



Qanuillirpitaa? 2017 is a population health survey carried out in Nunavik from August to October 2017. A total of 1 326 Nunavimmiut aged 16 and over from all 14 villages participated to this survey.

Nakurmiik to all Nunavimmiut who contributed to this important health survey!

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